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Journal of Medical Case Reports and Case Series ISSN: 2692-9880

Case Report Volume 2 Issue 13

Uterine rupture of the unscarred uterus: A case report

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Received date: 02 October 2021; **Accepted date:** 19 October 2021; **Published date:** 26 October 2021

Citation: Sá CPN, Arlindo EM, Raupp GS, Fortuna EL, Cunha Filho EV (2021) Uterine rupture of the unscarred uterus: A case report. J Med Case Rep Case Series 2(13): https://doi.org/10.38207/JMCRCS/2021/0213179

Abstract

Rupture of the unscarred pregnant uterus is a rare event. Characteristic signs and symptoms of uterine rupture include abdominal pain of a tearing quality, abnormal fetal heart rate, and vaginal bleeding, but these signs are not always present, and the presentation is often non-specific. Maternal morbidity is significant, with high rates of severe hemorrhage with frequent need for hysterectomy. Early diagnosis and treatment including aggressive fluid replacement, blood transfusion, and surgical intervention will significantly affect the prognosis.

Keywords: uterine rupture, unscarred uterus, cesarean delivery, hysterectomy

Introduction

Rupture of the pregnant uterus can be life-threatening for the mother and fetus. Maternal mortality ranges between 1-13 % and perinatal mortality between 74-92 %. **[1]** Spontaneous rupture of an unscarred uterus during pregnancy is a rare occurrence. Uterine rupture has been closely associated with the presence of uterine scarring, with 90 %of ruptures occurring in a previously scarred uterus, usually following cesarean delivery. **[2]** This article reports a case of uterine rupture on a gravid healthy uterus during the third trimester of pregnancy.

Case Report

A 30-year-old woman, primigravida, dichorionic diamniotic twin pregnancy, 32+3 weeks of gestation seeks care at obstetric emergency due to a sudden episode of epigastric pain, with irradiation to the back, accompanied by vomiting. The patient's medical history was otherwise not significant, and she had no history of abdominal surgery. She had received regular prenatal care. Vital signs were normal and stable.

She had normal uterine tone, irregular, and infrequent uterine contractions, and she had reported normal fetal movement. Pelvic examination showed no cervical dilation and no vaginal bleeding. The fetal heart rate tracing at presentation was reassuring for both fetuses (Cardiotocography - Category I) and the fetal biophysical profile scored 8/8 for both fetuses. Laboratory tests and abdominal ultrasounds were performed with no findings. The patient had progressive worsening of pain during care and had no relief with the use of intravenous analgesics. The hypothesis of uterine rupture was raised, and a cesarean delivery was indicated. The newborns presented Apgar scores of 8 and 9 at the first minute and weights close to 1,900 grams. During the transoperative period, an area of uterine rupture was identified at the fundus in the posterior wall, measuring about 2 centimeters, and the uterine defect was repaired with 0.0 vicryl. The patient and the babies had an excellent evolution, with no complications.

Discussion

Uterine rupture is an unusual but serious obstetrical complication. Rupture of an unscarred uterus may be caused by trauma, congenital disorder, acquired weakness of the myometrium, or overdistension of the uterine cavity. **[3]** Numerous factors are known to increase the risk of uterine rupture, including prolonged labor, exposure to uterotonic drugs (oxytocin and prostaglandins), high parity, uterine anomalies, advancing maternal age, dystocia, macrosomia, multiple gestations, abnormal placentation, and short interpregnancy interval. **[4-6]** The clinical presentation of rupture can vary, and the initial signs and symptoms of uterine rupture are typically nonspecific, which makes the diagnosis challenging and sometimes delays appropriate therapy. The most common clinical manifestations of uterine rupture are fetal heart rate changes (bradycardia), abdominal pain, hemodynamic changes (hypotension and ta chycardia), uterinetenderness, cessation

of contractions, change in uterine shape, and vaginal bleeding. The diagnosis of uterine rupture is typically made at laparotomy by visualization of complete disruption of all uterine layers with active bleeding. **[6-9]** The uterus must be repaired after rupture and a hysterectomy is often needed. Additional surgical goals are to control hemorrhage including aggressive fluid replacement and sometimes blood transfusion and to identify injury to the bladder and other organs. Early diagnosis and surgical intervention will significantly affect the prognosis. **[3,10]** The optimal repair technique has not been established. A reasonable approach is to repair the uterine defect in two or three layers with an absorbable suture. If the laceration extends to the bladder or there is any suspicion of ureteral injury, an intraoperative evaluation with a urological surgeon is recommended. The decision to perform a hysterectomy is based on a combination of factors, including the patient's desire for future pregnancy, the extent of uterine damage, and the patient's hemodynamic stability. **[3,11]**

Conclusion

Uterine rupture in the unscarred uterus remains unusual and is a serious complication that causes high maternal and fetal morbidity and mortality. Obstetricians must be vigilant in the setting of severe abdominal pain. The early diagnosis with rapid initiation of supportive and surgical care may significantly affect the prognosis.

Conflicts of Interest: None declared

References

1. Gibbins KJ, Weber T, Holmgren CM, Porter TF, Varner MW, et al. (2015) Maternal and fetal morbidity associated with uterine rupture of the unscarred uterus. Am J Obstet Gynecol. 213(3): 382.e1-6.
2. Justus Hofmeyr G, Say L, Metin Gülmezoglu A (2005) WHO systematic review of maternal mortality and morbidity: the prevalence of uterine rupture. BJOG. 112(9): 1221–1228.
3. Smith JF, Wax JR. Uterine rupture: Unscarred uterus. In: Lockwood CJ, Barss VA, ed. *UpToDate*, 2021.
4. Ofir K, Sheiner E, Levy A, Katz M, Mazor M (2003) Uterine rupture: risk factors and pregnancy outcome. Am J Obstet Gynecol. 189: 1042–6.
5. Ronel D, Wiznitzer A, Sergienko R, Zlotnik A, Sheiner E (2012) Trends, risk factors and pregnancy outcome in women with uterine rupture. Arch Gynecol Obstet. 285(2): 317-21.
6. Markou GA, Muray JM, Poncelet C (2017) Risk factors and symptoms associated with maternal and neonatal complications in women with uterine rupture. A 16 years multicentric experience. Eur J Obstet Gynecol Reprod Biol. 217: 126-130.
7. Al-Zirqi I, Vangen S (2020) Prelabour uterine rupture: characteristics and outcomes. BJOG. 127(13): 1637- 1644.
8. Walsh CA, Baxi LV (2007) Rupture of the primigravid uterus: a review of the literature. Obstet Gynecol Surv. 62(5): 327.
9. Pinton A, Boudier E, Joal A, Sananes N, Severac F, et al. (2016) Risk Factors and Clinical Presentation of Uterine Rupture in the Unscarred Uterus: A Case Control Study. J Preg Child Health. 3: 284.
10. Rottenstreich M, Rotem R, Hirsch A, Farkash R, Rottenstreich A, et al. (2021) Delayed diagnosis of intrapartum uterine rupture - maternal and neonatal consequences. J Matern Fetal Neonatal Med. 34(5): 708-713.
11. Kapoor DS, Sharma SD, Alfirevic Z (2003) Management of unscarred ruptured uterus. J Perinat Med. 31(4): 337-9.